

Water Conditions Summary

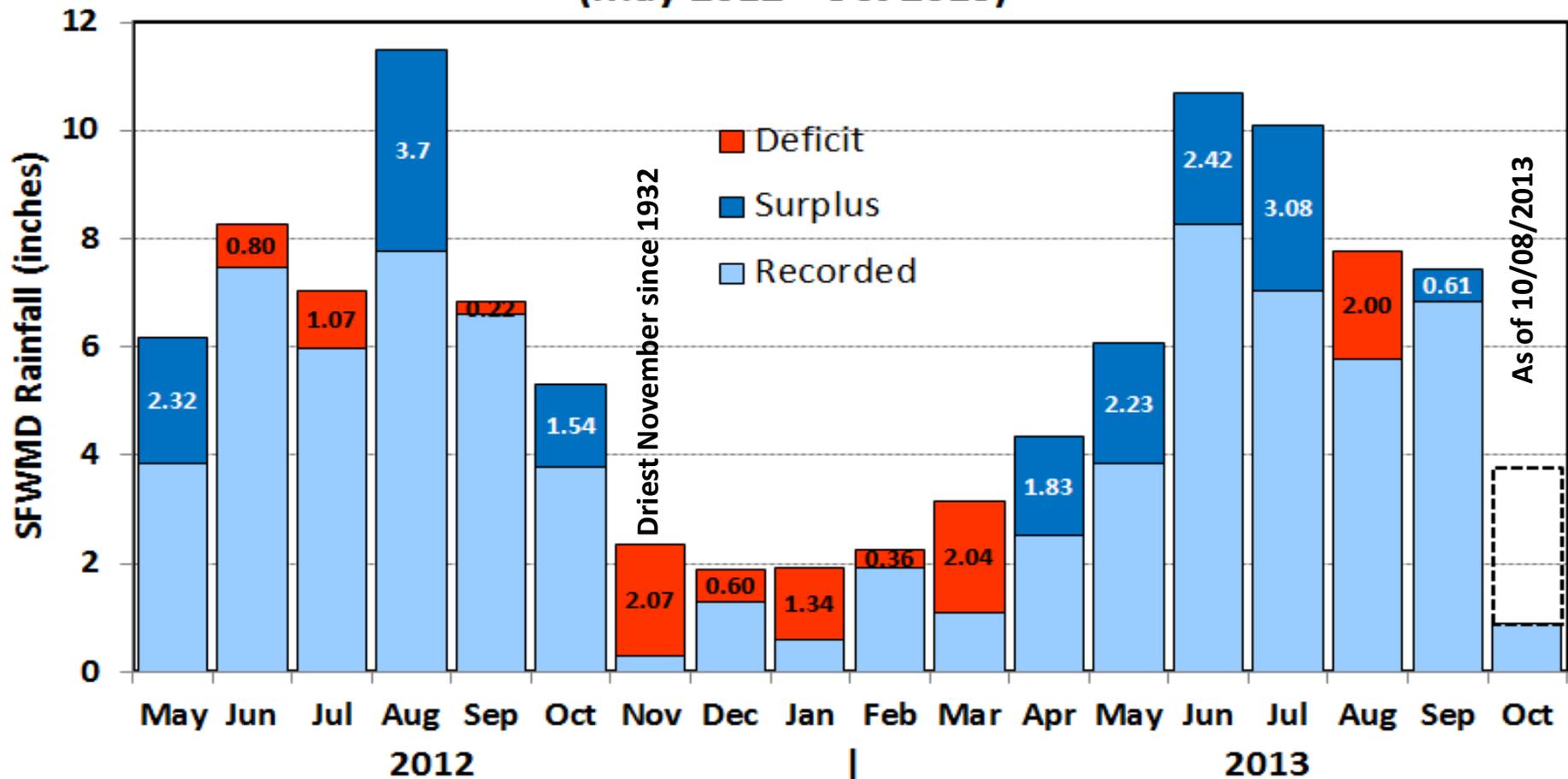
South Florida Water Management District
Governing Board Meeting

October 10, 2013

Tommy B. Strowd, P.E., Assistant Executive Director
Operations, Maintenance & Construction
South Florida Water Management District

SFWMD Rainfall Distribution Comparison

(May 2012 - Oct 2013)



2012 WET SEASON:

- Started early with wet May, followed by dry June and July. TS Isaac brought August rainfall high above average.
- Ended up above average.

2012-13 DRY SEASON:

- Driest November since 1932
- Below average despite April/May being above

2013 WET SEASON:

- May 18th Start
- T.S. Andrea produced 3.1 inches District wide
- Above average so far

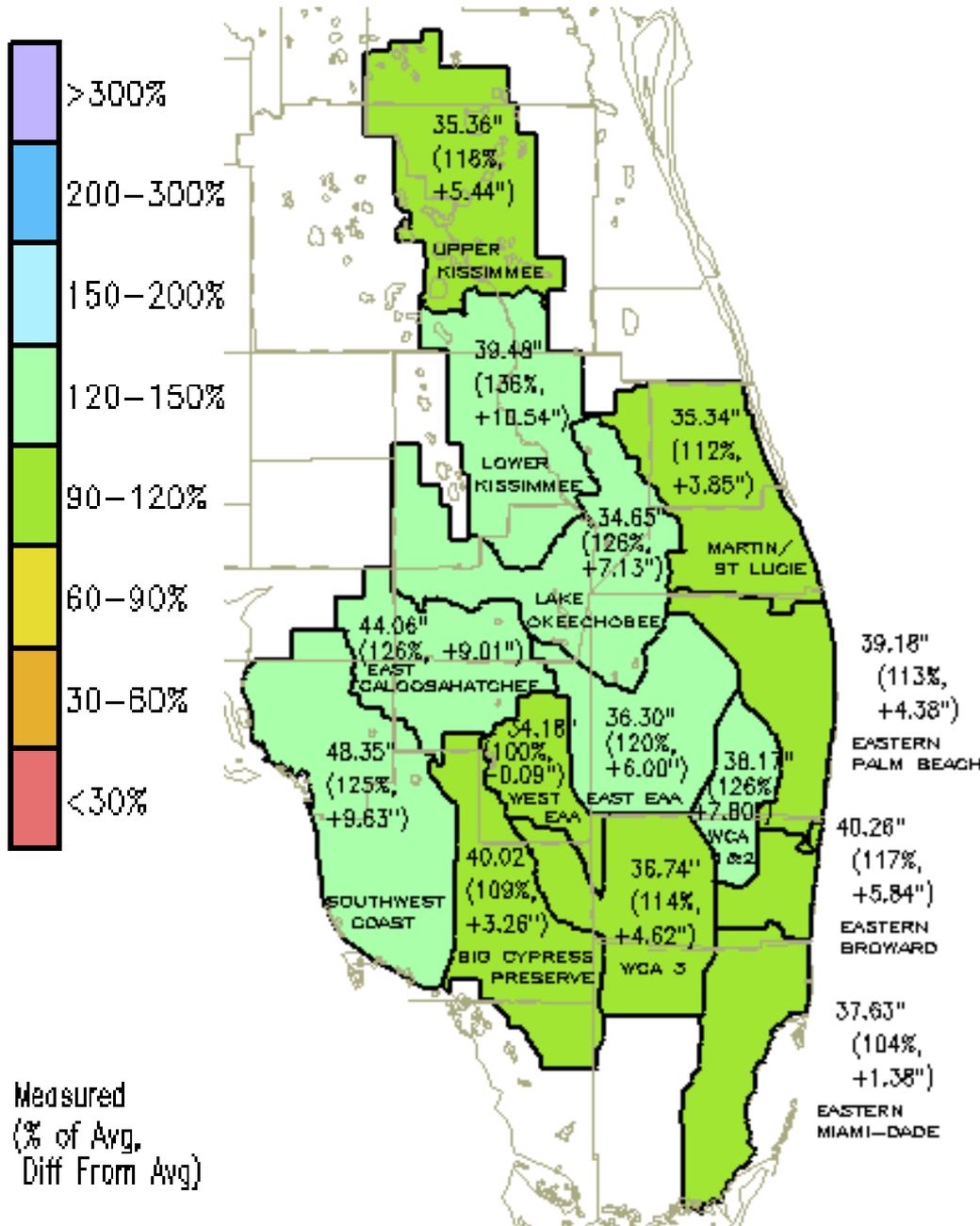
SFWMD

Wet Season Rainfall

May 18 2013 – Oct 8 2013

**DISTRICT-WIDE: 38.99"
(120% of Avg, or +6.37")**

- Wet Season Started ~ May 18th
- All basins > 100% average
- April-July was very wet
- April-September period with 45.22" was the wettest since 1960 (53-yr period)



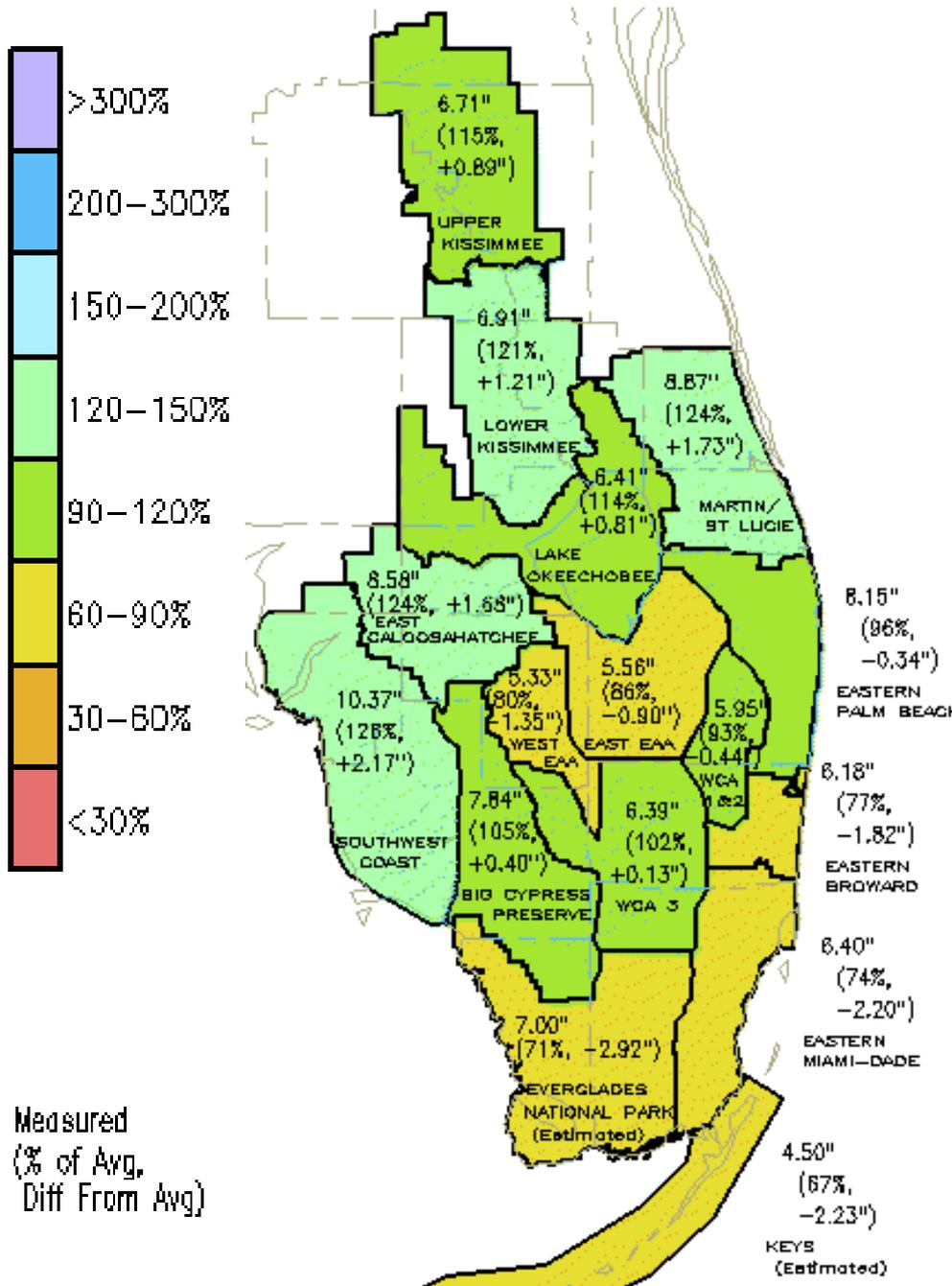
SFWMD

Sept. 2013 Rainfall

(Sep 2 to Oct 1, 2013)

DISTRICT-WIDE: 7.44"
(109% of Avg, or +0.61")

- September 2013 rainfall was slightly above average
- Wettest September since 2004
- Wettest area Caloosahatchee Basin Southwest Coast (128%)



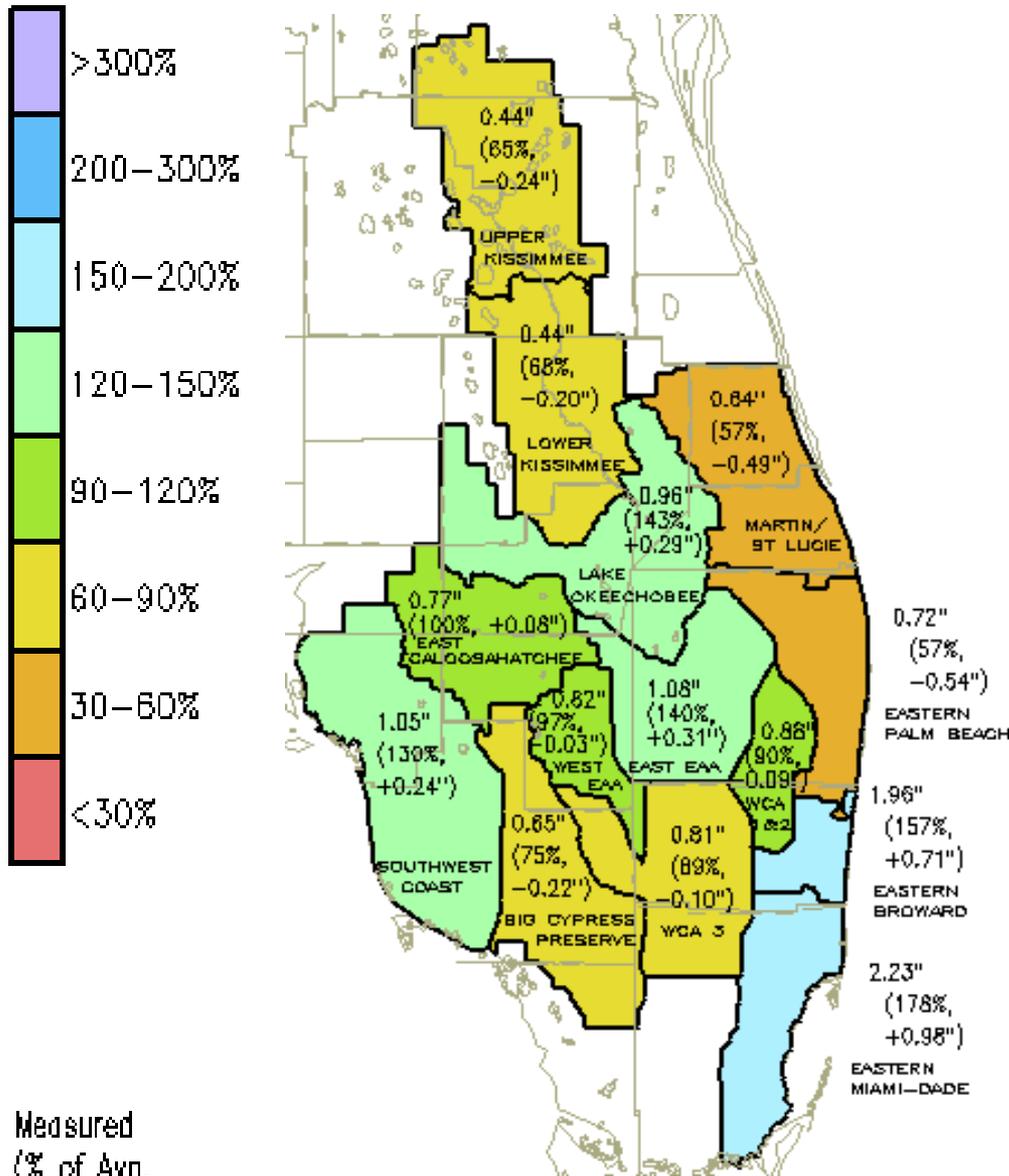
SFWMD

Oct. 2013 Rainfall

(through 7am Oct 8th)

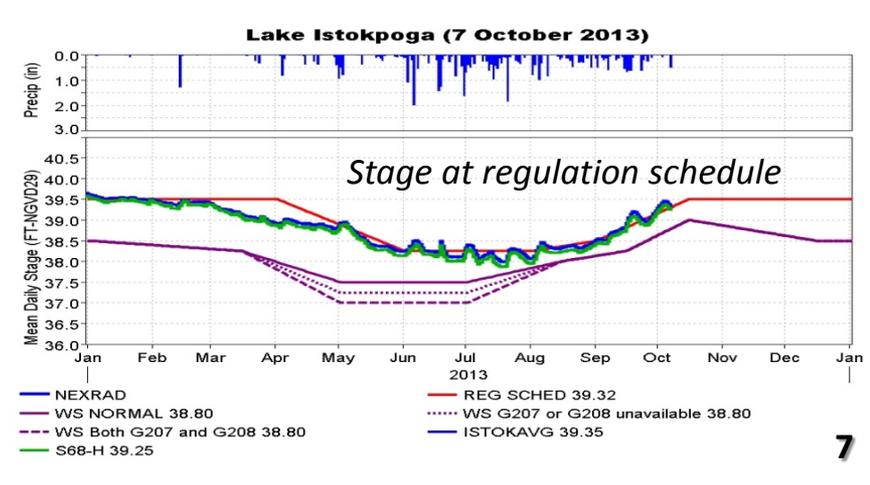
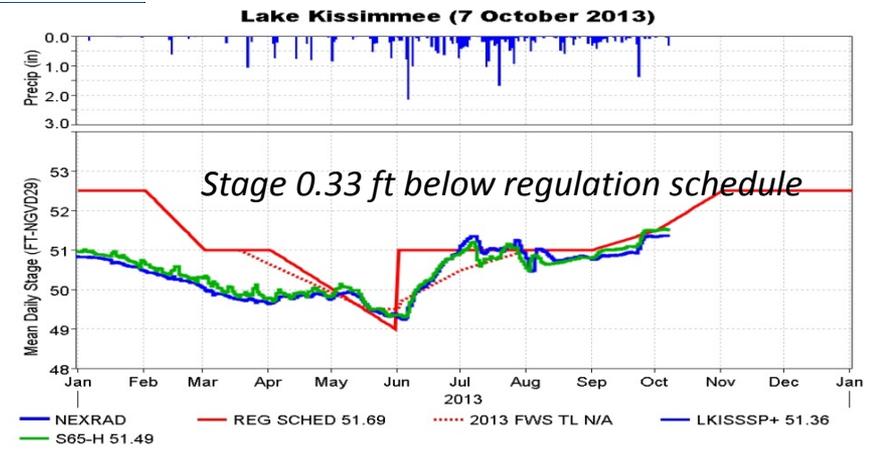
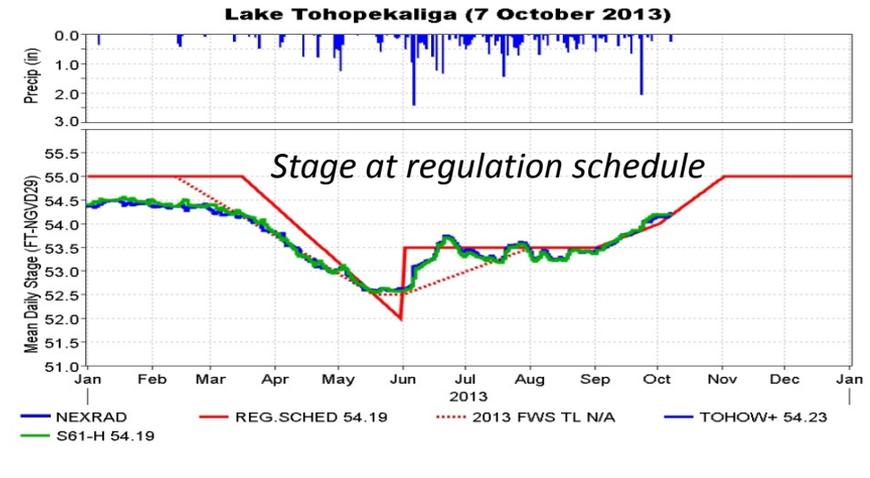
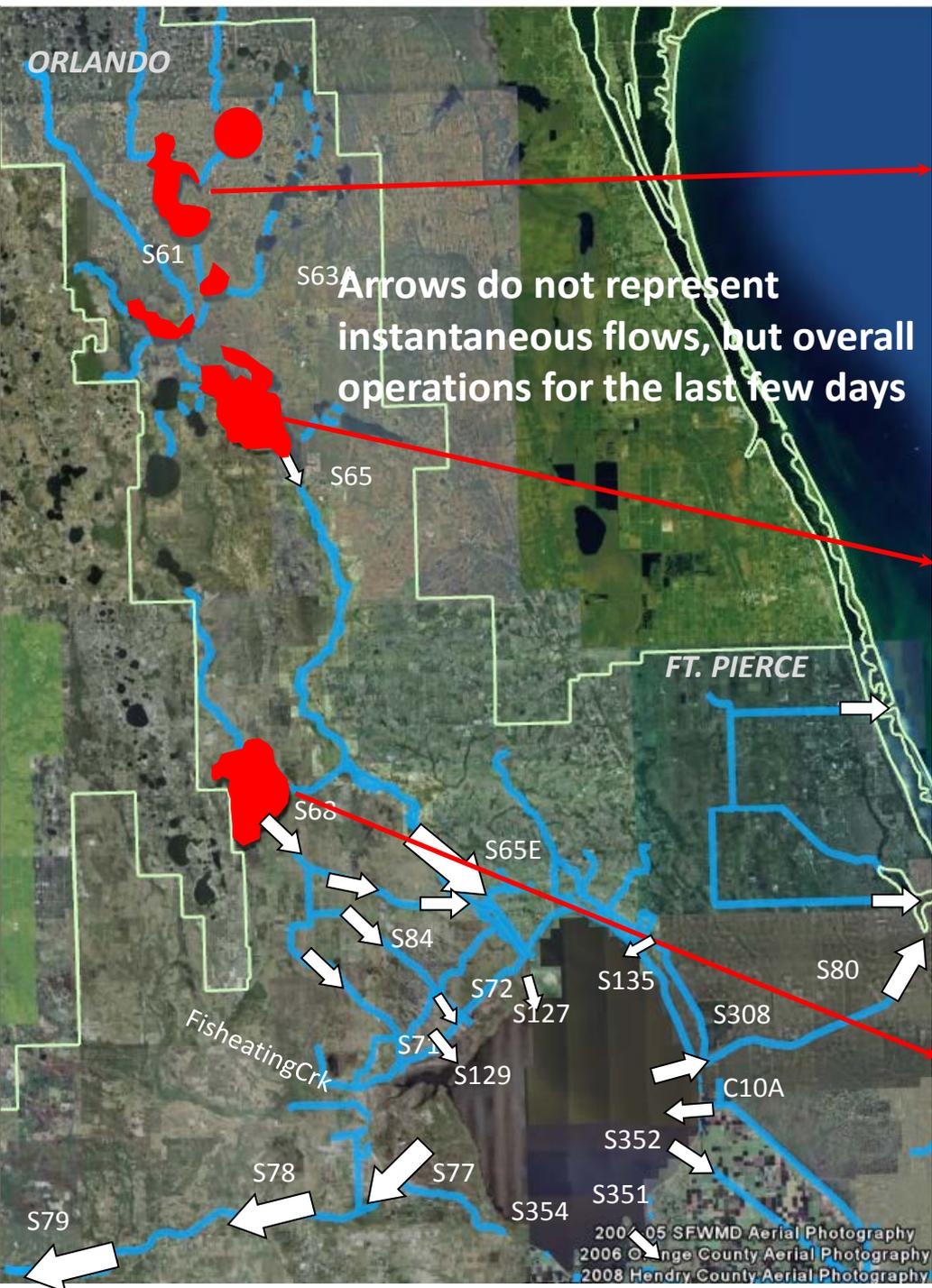
DISTRICT-WIDE: 0.88"
(103% of Avg, or +0.03")

- So far October is average
- About 0.5" fell on Oct. 7th



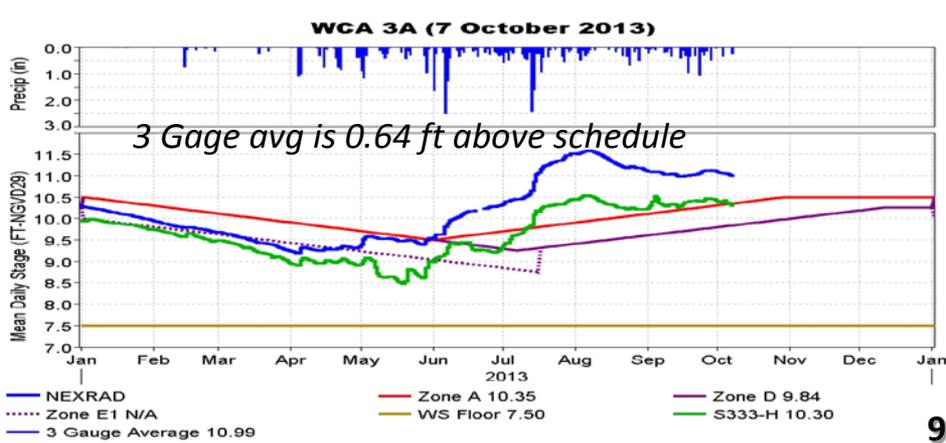
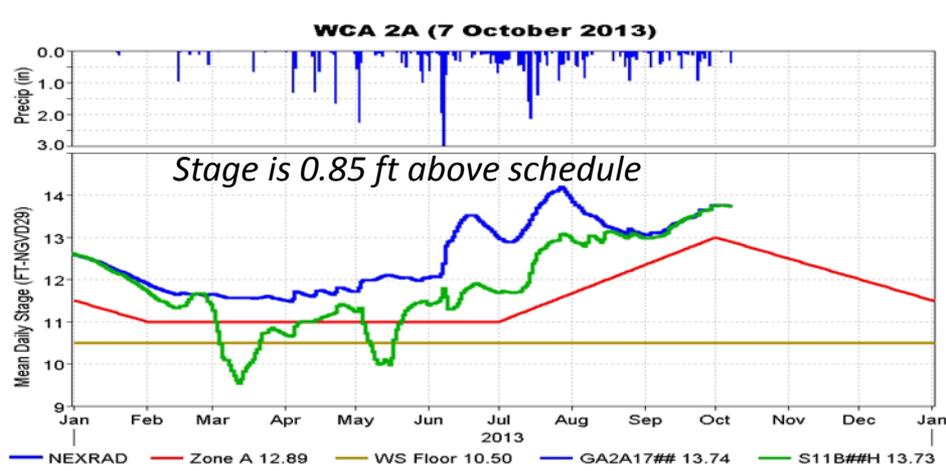
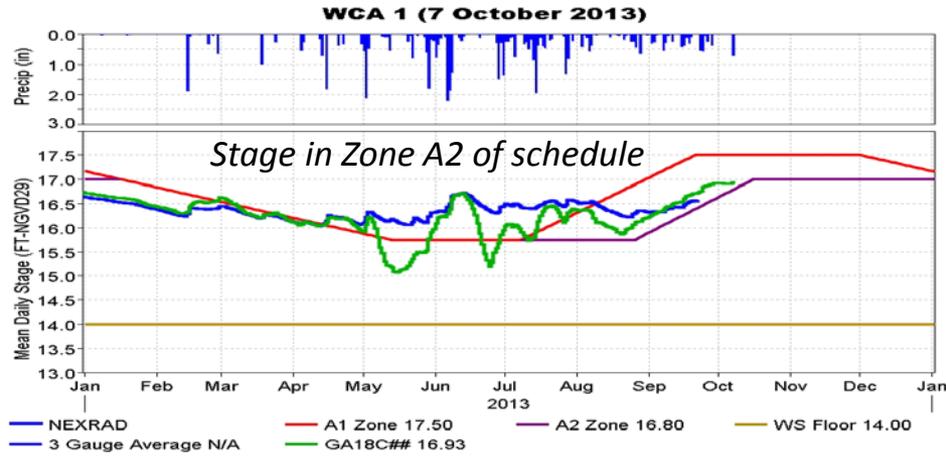
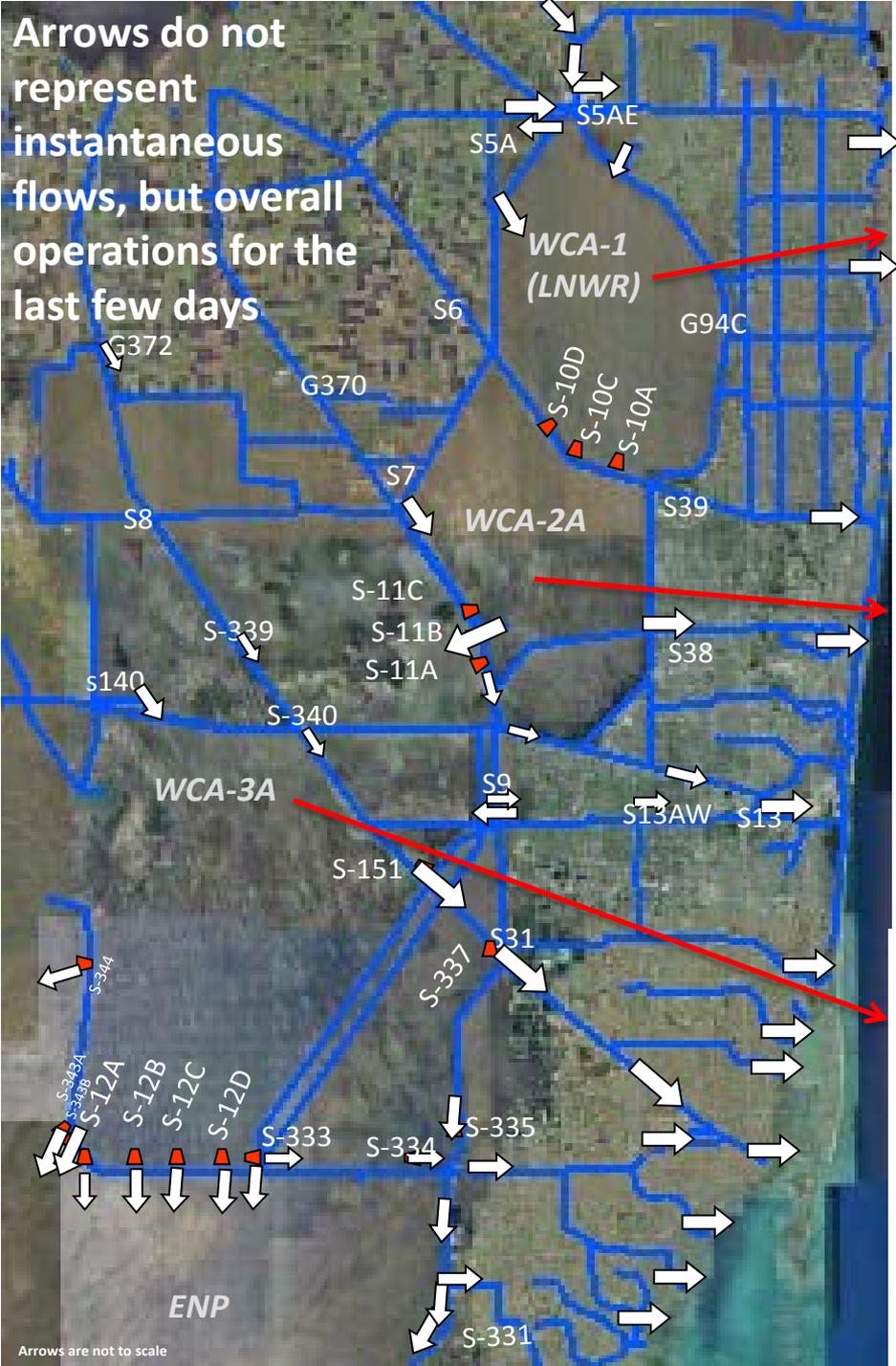
Kissimmee Basin





Water Conservation Areas

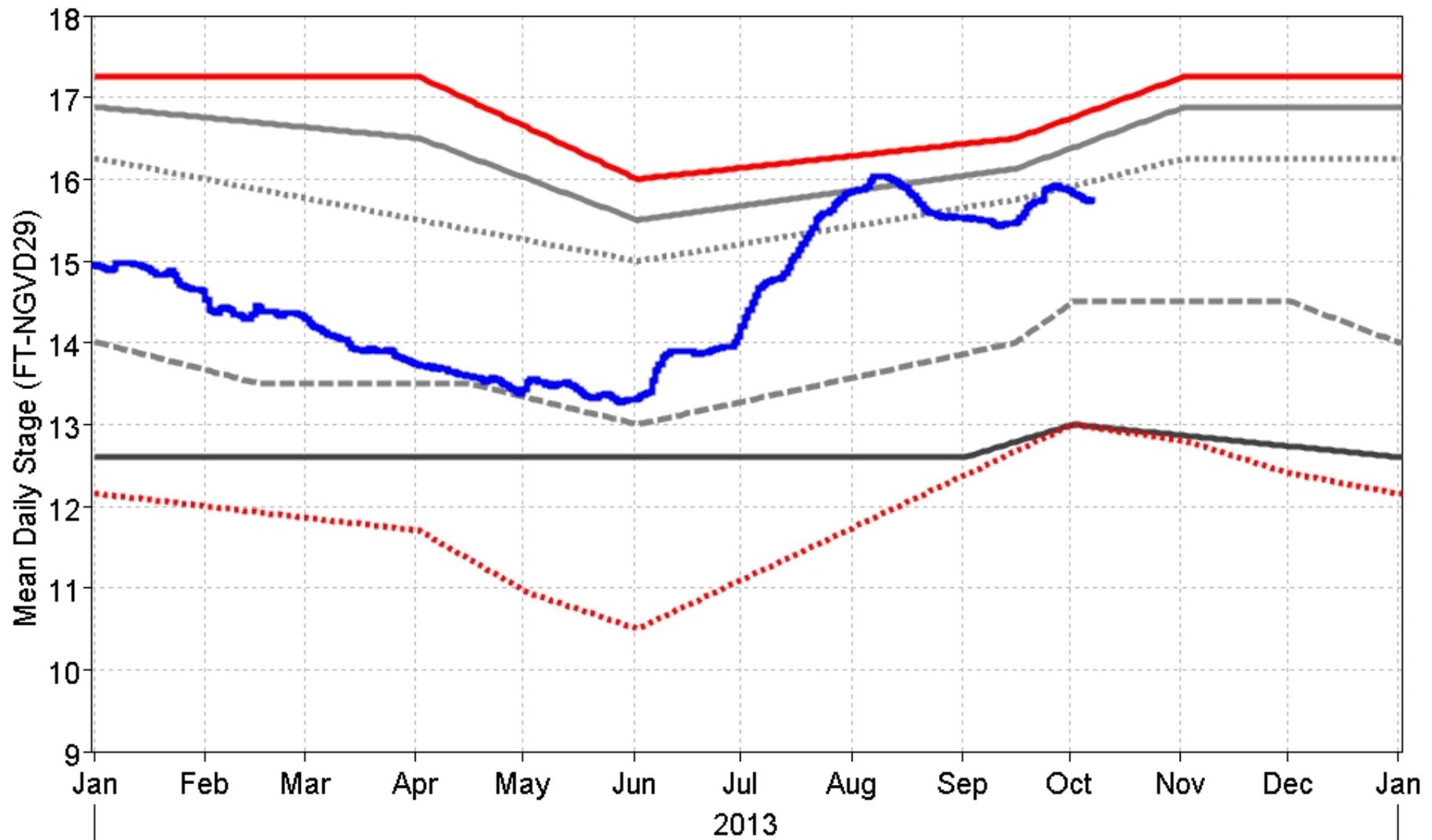




Lake Okeechobee Operations



Lake Okeechobee (7 October 2013)

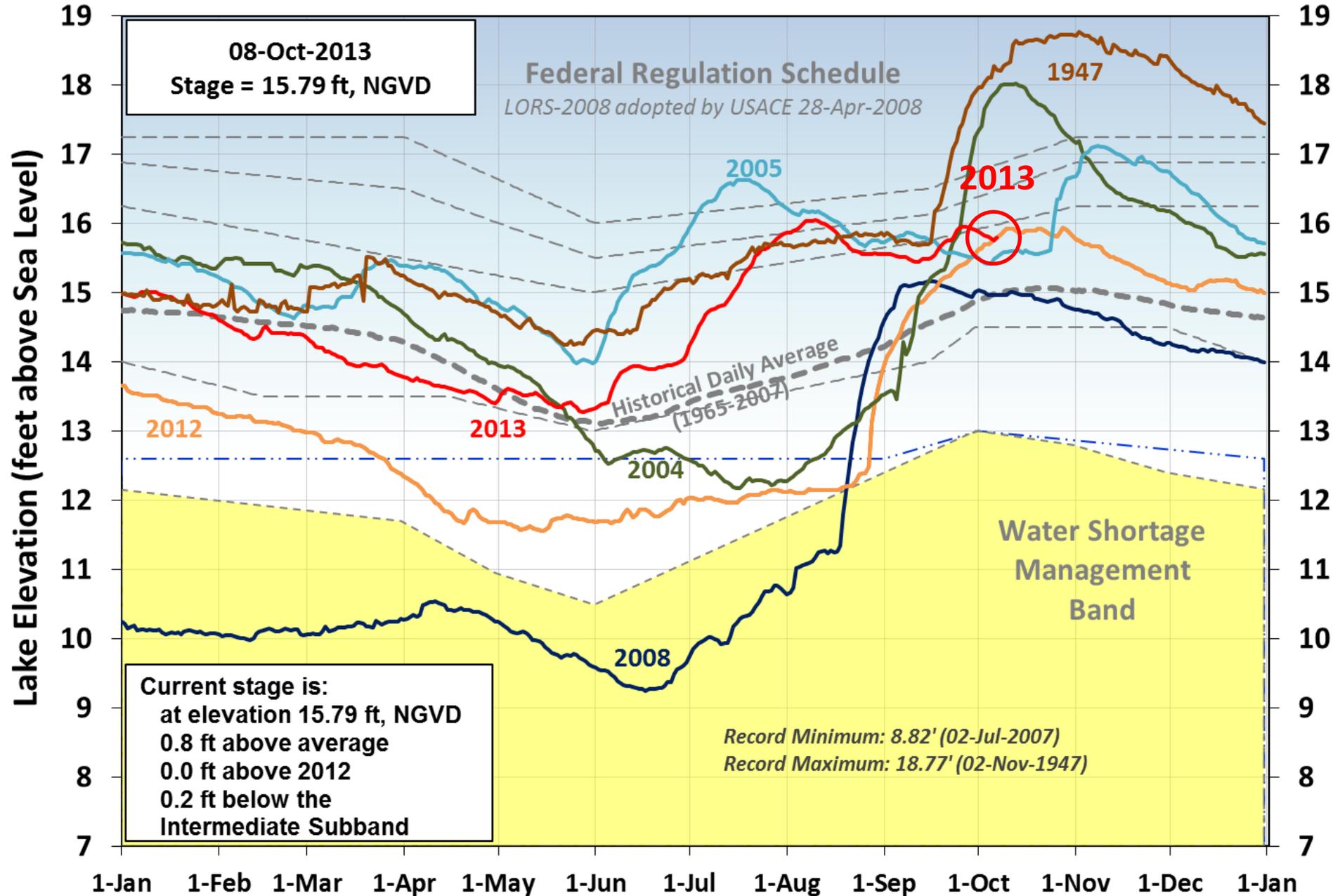


— MAXIMUM RELEASES 16.85
— LOW 14.50
— LAKEOAVG 15.75

— HIGH 16.48
— BASE FLOW 12.97

..... INTERMEDIATE 15.98
..... LOWSM 12.96

Lake Okeechobee Water Level Comparison



Lake Okeechobee: Current Operations

USACE's Lake O Regulation Schedule (2008 LORS)

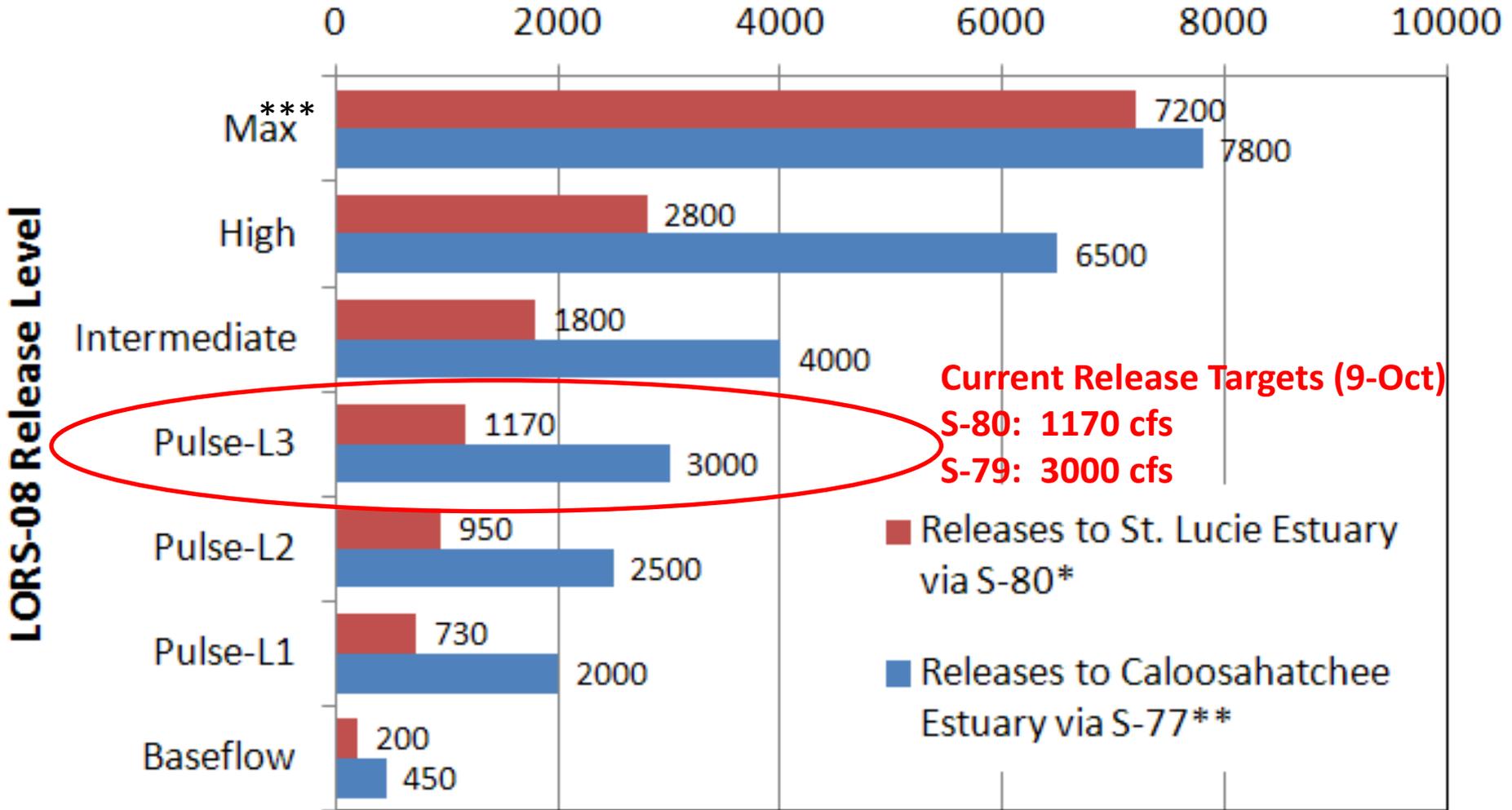
- Stage (~15.76 feet, NGVD) within the upper third of the Low Subband
- Tributary Hydrologic Condition (THC) decreased from very wet to wet in late this week
- Current week release guidance outcome:
 - S-79: up to 3000 cfs
 - S-80: up to 1170 cfs
- Up to maximum practicable to the WCAs if desirable or with minimum Everglades impacts

Recent History and Status

- 24-Aug-2013: USACE decreased discharge targets:
 - S-77: from 4000 to 3000 cfs (measured at S-79)
 - S-80: from 1800 to 1170 cfs
- 14-Aug-2013: WCA-1 stage receded below its regulation schedule and the SFWMD initiated Lake regulatory discharges through WCA-1 to tide
- No Lake regulatory discharges to WCA-2A or WCA-3A because stages exceed their respective regulation schedules

Lake Okeechobee Regulation Schedule 2008

Release Rates (cfs)



* Releases at S-308 are limited by C-44 basin runoff

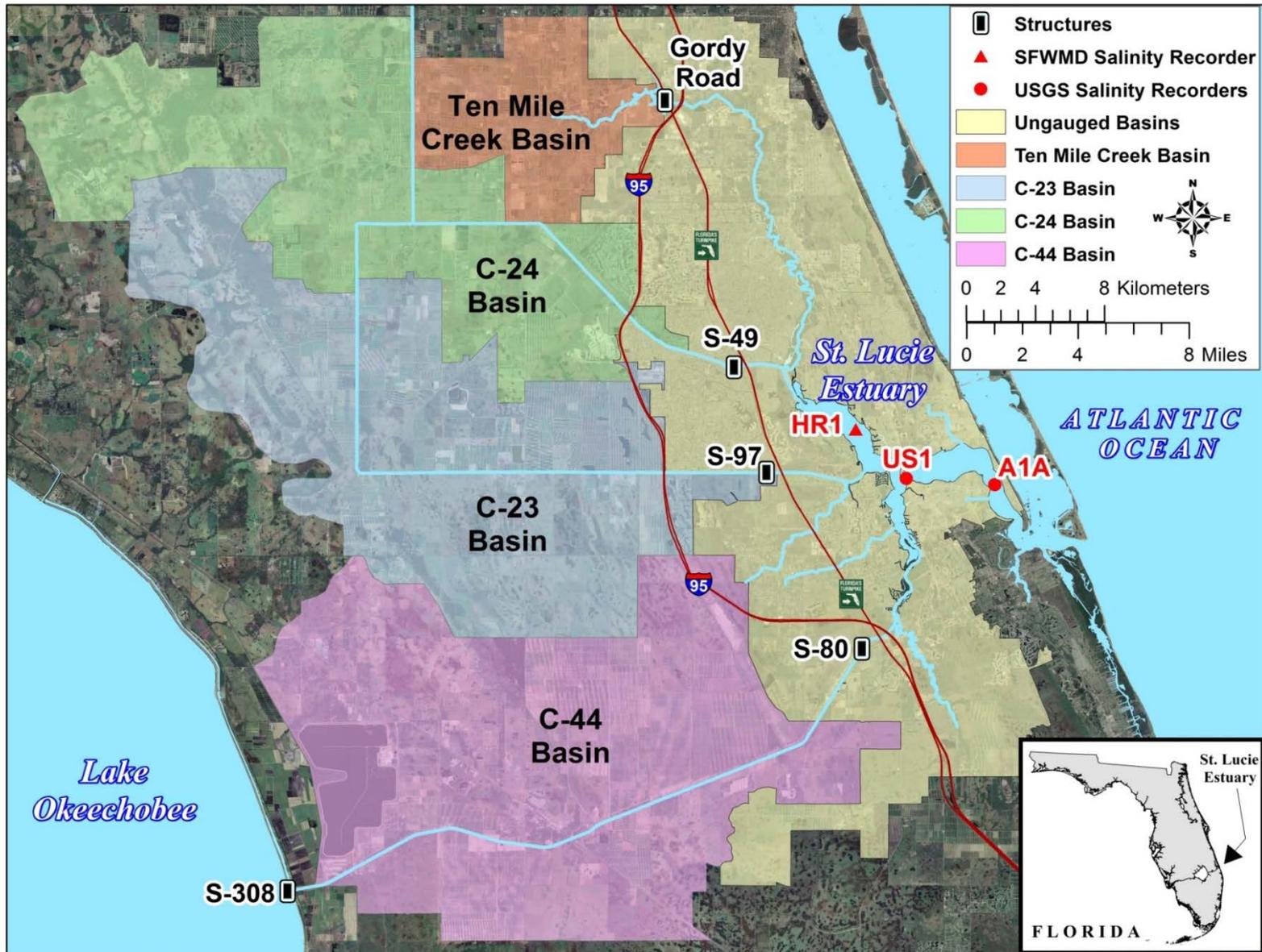
** Baseflow Releases and Pulse Releases at S-77 are limited by C-43 basin runoff

*** Maximum Release rates depend on Lake and canal stages

St. Lucie & Caloosahatchee Estuaries



St. Lucie Estuary Drainage Basins

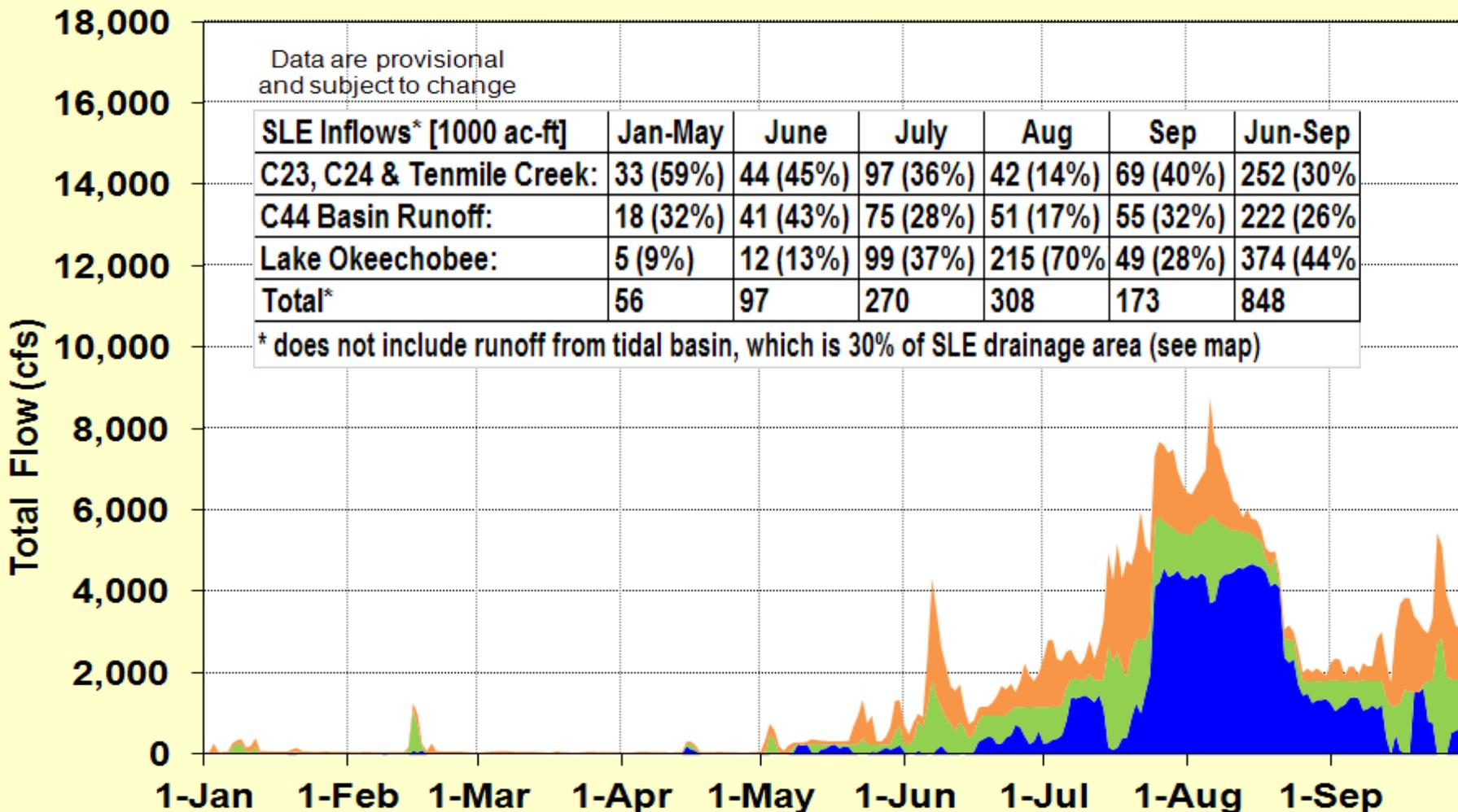


2013 Discharges to the St. Lucie Estuary

Data are provisional and subject to change

SLE Inflows* [1000 ac-ft]	Jan-May	June	July	Aug	Sep	Jun-Sep
C23, C24 & Tenmile Creek:	33 (59%)	44 (45%)	97 (36%)	42 (14%)	69 (40%)	252 (30%)
C44 Basin Runoff:	18 (32%)	41 (43%)	75 (28%)	51 (17%)	55 (32%)	222 (26%)
Lake Okeechobee:	5 (9%)	12 (13%)	99 (37%)	215 (70%)	49 (28%)	374 (44%)
Total*	56	97	270	308	173	848

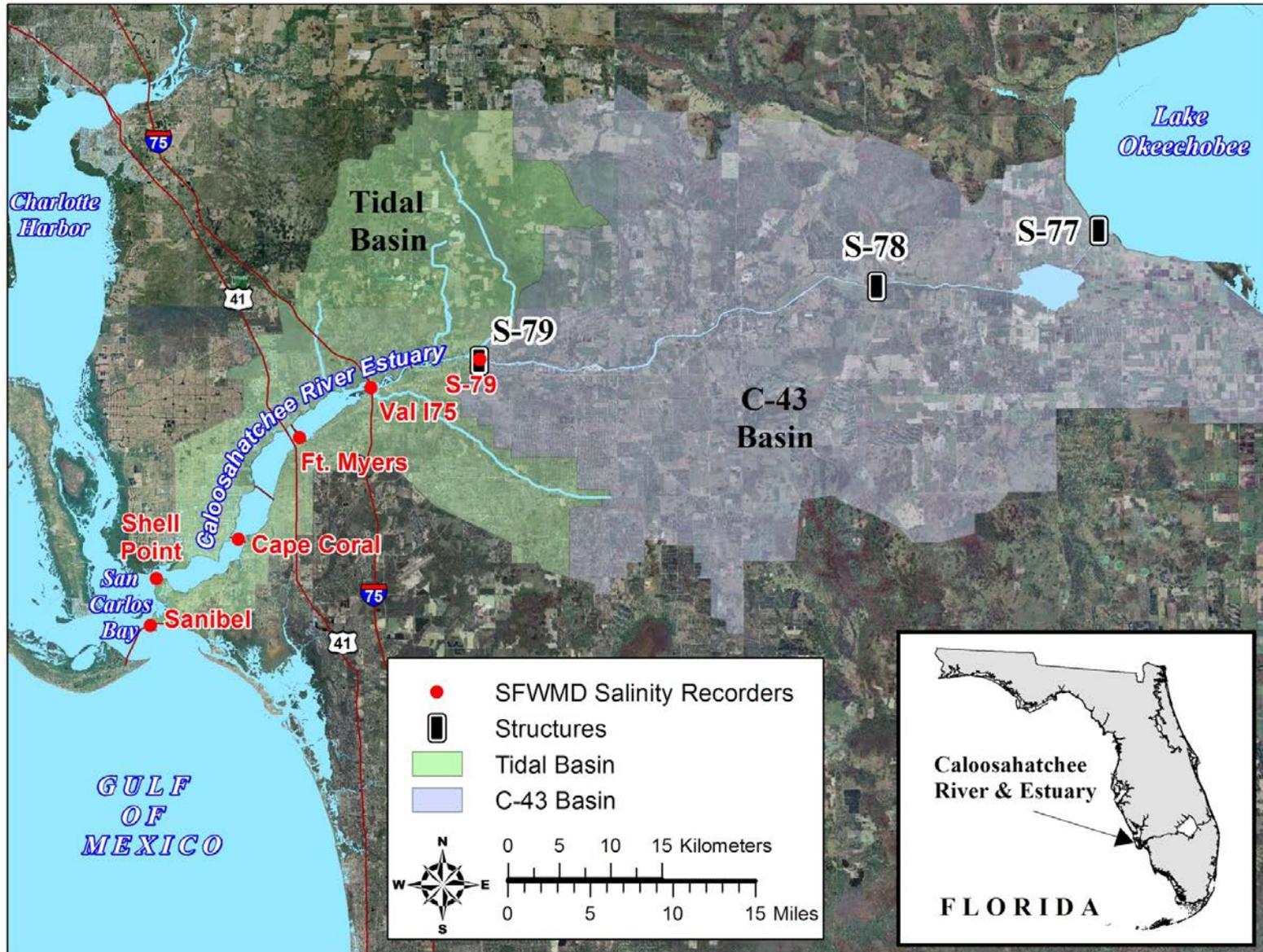
* does not include runoff from tidal basin, which is 30% of SLE drainage area (see map)



- Inflow from C-24, C23, and Tenmile Creek Basins*
Does not include runoff from tidal basin or groundwater
- C-44 Basin Runoff
- Inflow from Lake

Data through Sep 30th

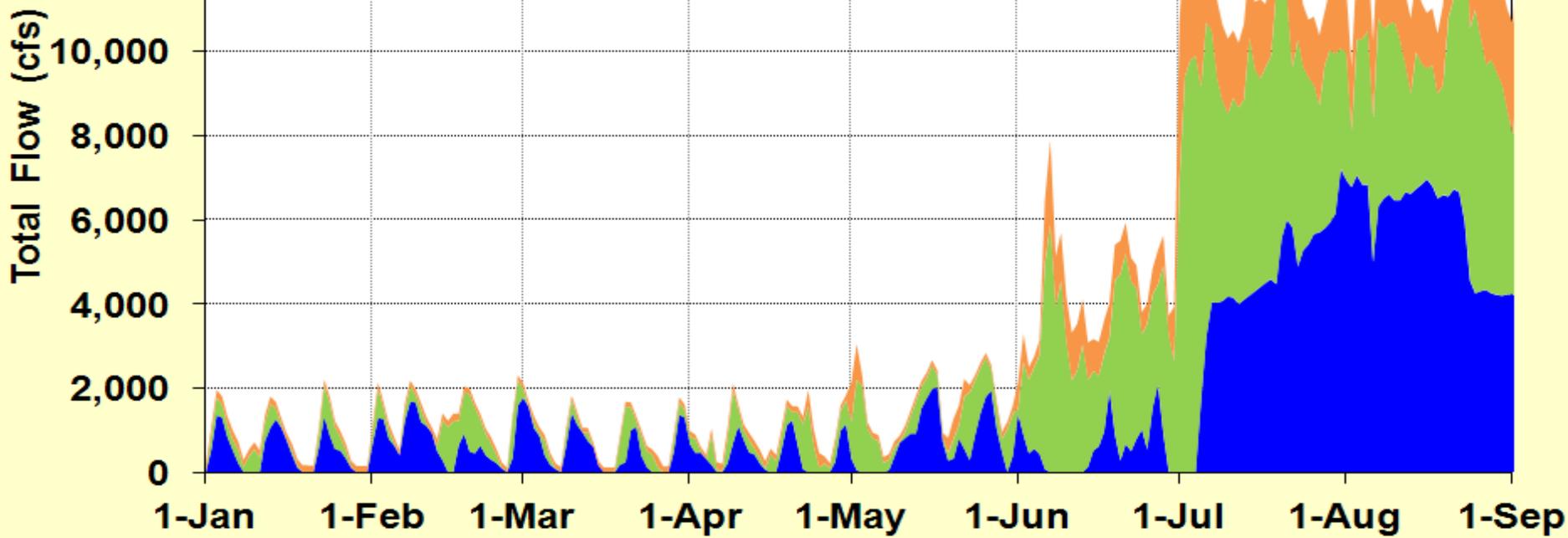
Caloosahatchee Estuary Drainage Basins



2013 Discharges to the Caloosahatchee Estuary

18,000	CRE Inflows [1000 ac-ft]	Jan-May	June	July	Aug	Sep	Jun-Sep
	Tidal Basin (estimated):	49 (14%)	49 (19%)	120 (17%)	121 (16%)	129 (21%)	419 (18%)
16,000	C43 Basin Runoff:	124 (36%)	173 (67%)	338 (47%)	252 (34%)	287 (48%)	1050 (45%)
14,000	Lake Okeechobee	170 (50%)	34 (13%)	257 (36%)	369 (50%)	187 (31%)	846 (37%)
	Total	343	256	715	742	603	2316

Data are provisional and subject to change



■ Inflow from Lake	<i>Data through Sep 30th</i>
■ C-43 Basin Runoff	
■ Tidal Basin Runoff (downstream of S-79)	

Other Operations



Special Operations

Aug – Sep 2013

Lake Okeechobee –
L-8 – C-51 to tide

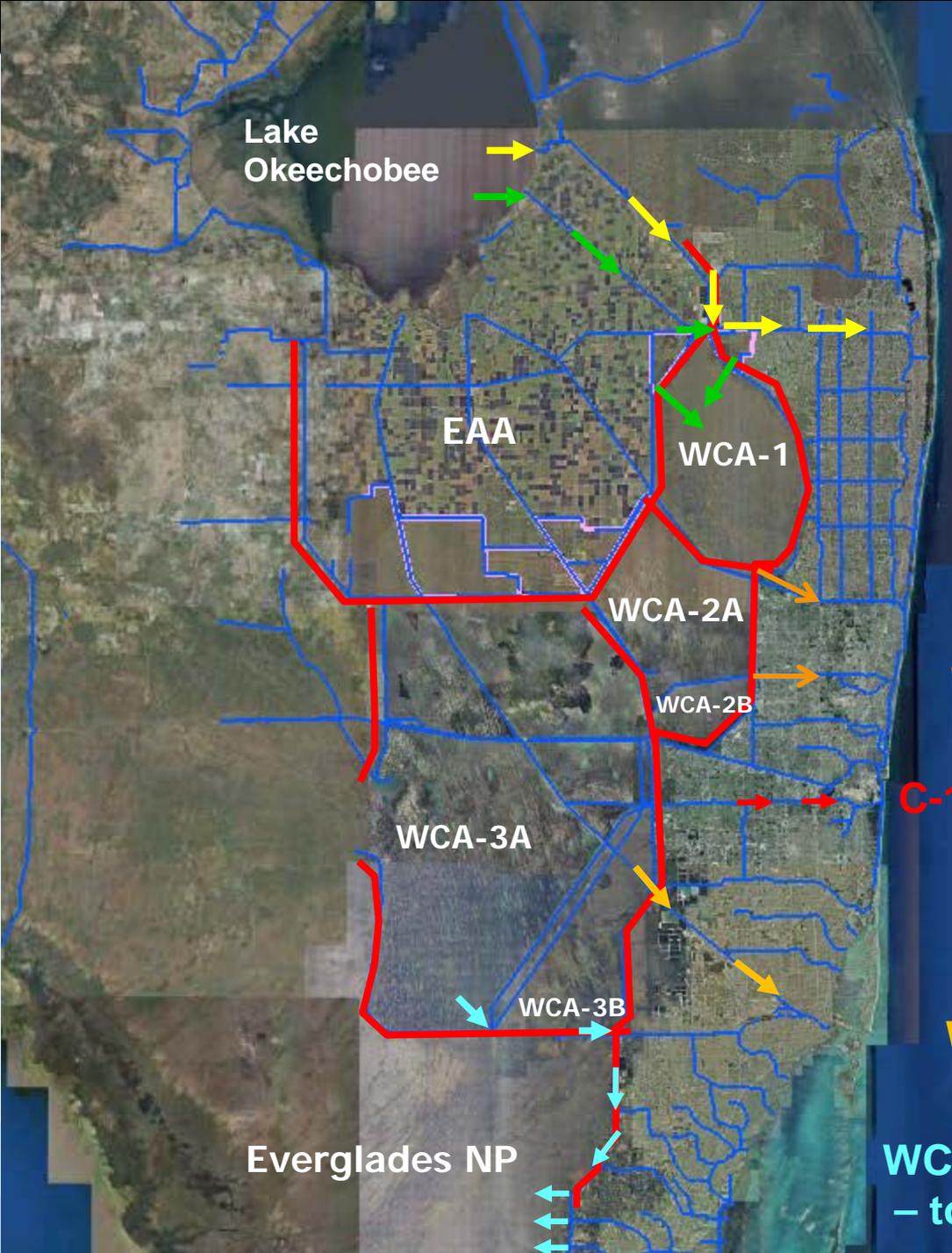
Lake Okeechobee – WPB Canal
to STA1 (Pump) - WCA-1 (Pump)

Normal Regional Operations –
WCA-1 & 2 to tide

C-11 West – S13A – S13 (Pump) – to tide

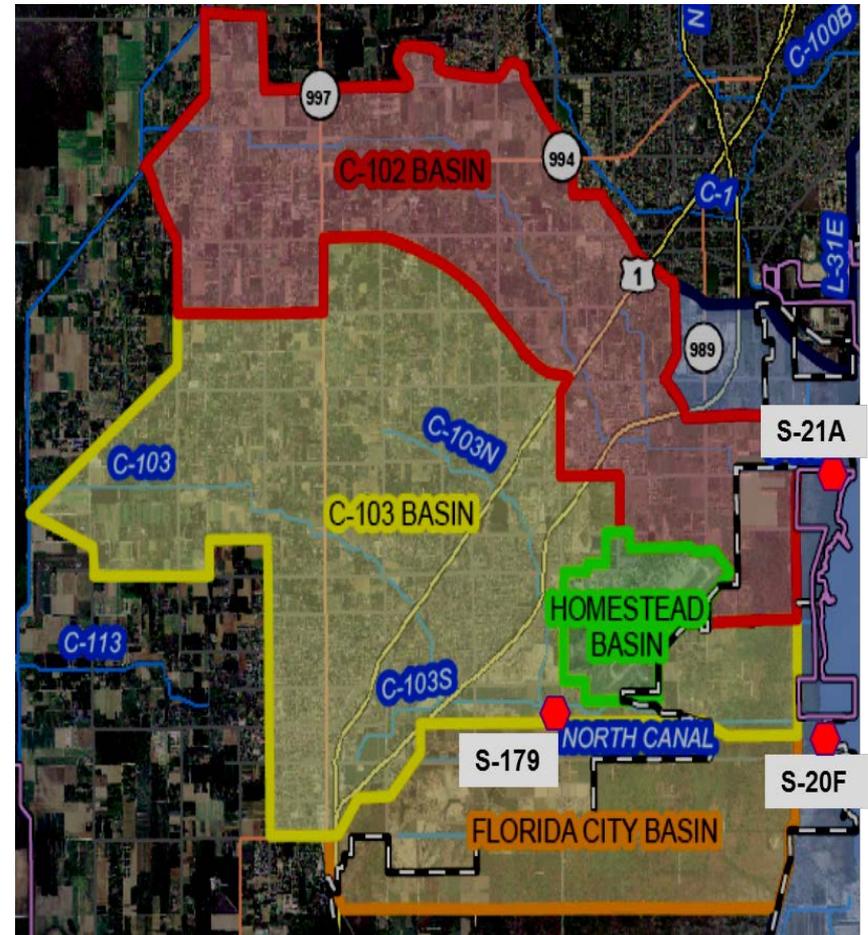
WCA-3 – C-6 – S-26 (Pump) – to tide

WCA3 – Tamiami Canal – SDCS (Pump)
– to ENP



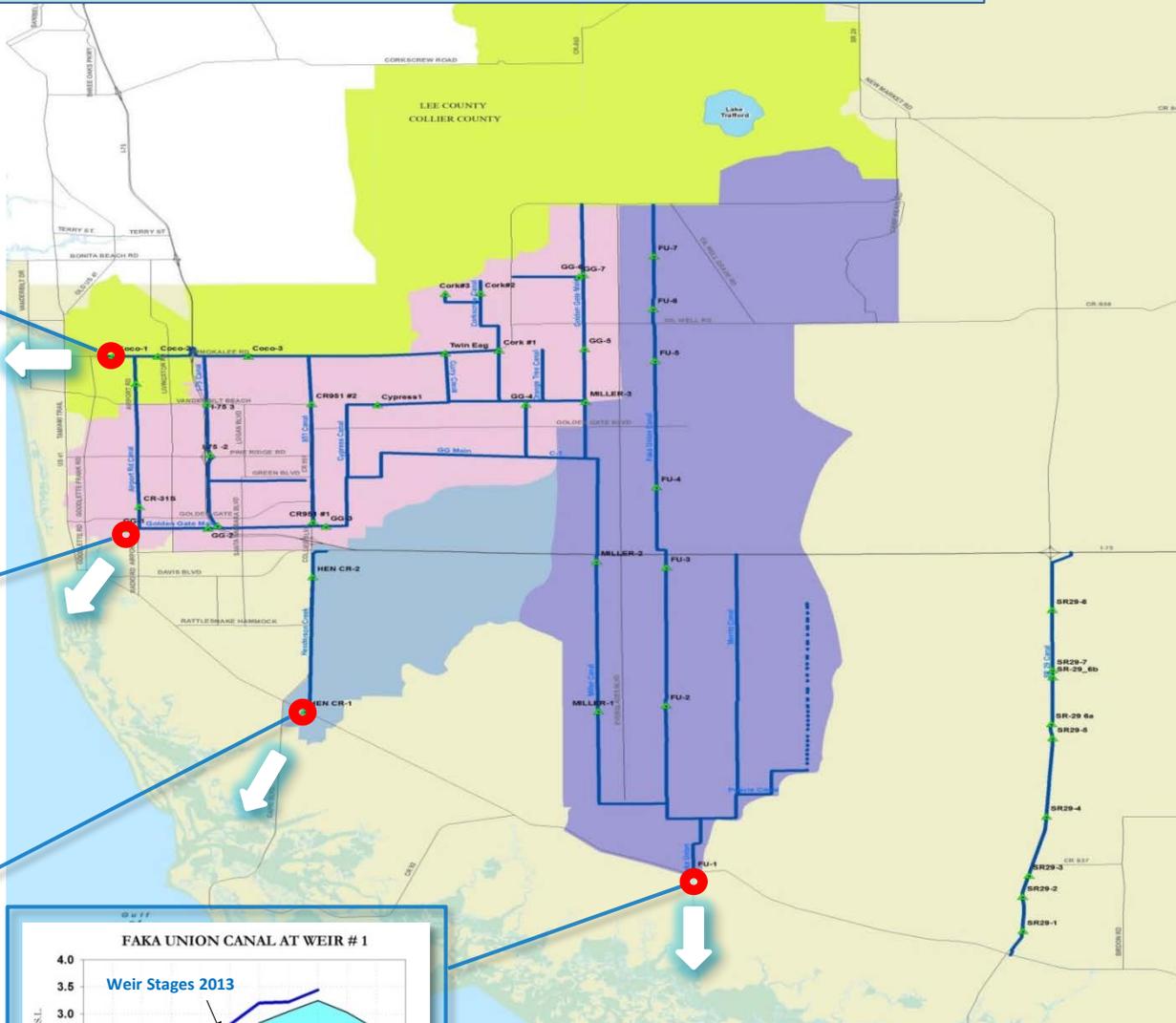
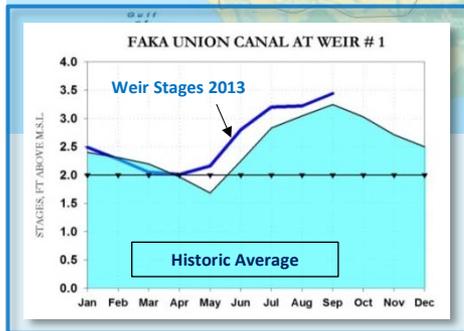
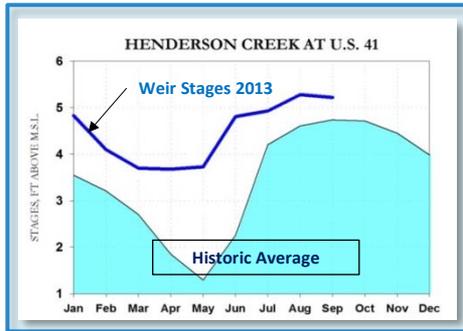
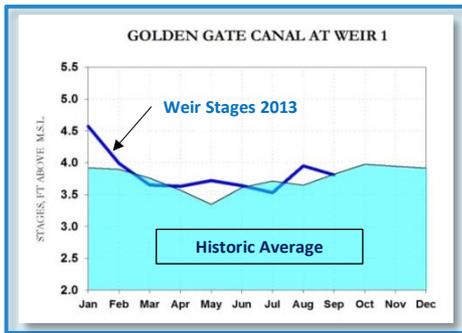
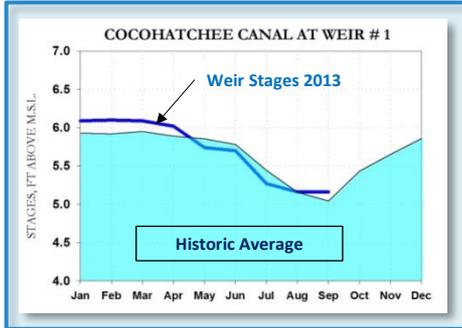
2013-2014 South Miami-Dade Seasonal Agricultural Operations

- Based on field conditions and groundwater levels, the District will proceed with the canal drawdown in South Dade County on October 15th
- **C-102 Basin:**
Shift operations of S-21A to low range; - open at 1.4 ft., close at 1.0 ft.
- **C-103 Basin:**
Shift operations of structure S-20F to low Range; - open at 1.4 ft., close at 1.0 ft.
- Shift S-179 to Low range; - open at 3.1 and close at 2.7
- Consider nearshore Bay salinity and groundwater conditions when shifting operational ranges in winter/spring season



BIG CYPRESS BASIN

WEIR STAGES - YTD COMPARED TO HISTORIC AVERAGE



BCB Major Drainage Basins with Coastal Outfalls

- Cocohatchee-Corkscrew Basin
- Golden Gate Canal Basin
- Henderson Creek Basin
- Faka Union Canal Basin
- BCB Boundary

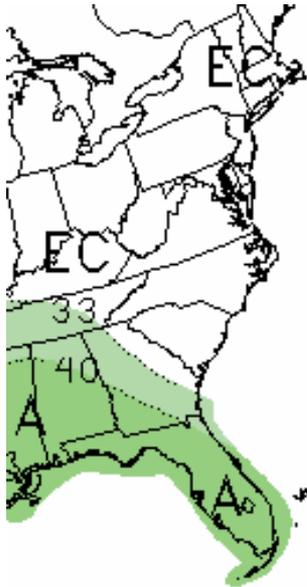
Hydrologic Outlook



U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)

Oct 2013



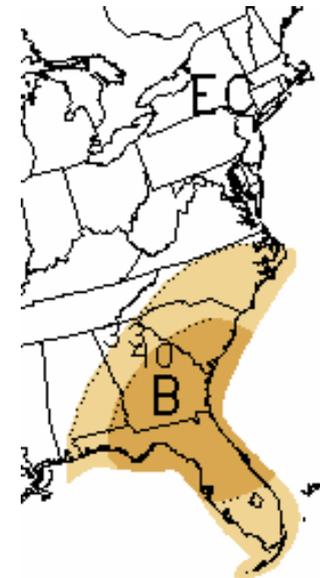
Made 30-Sep-2013

Oct-Dec 2013



Made 15-Aug-2013

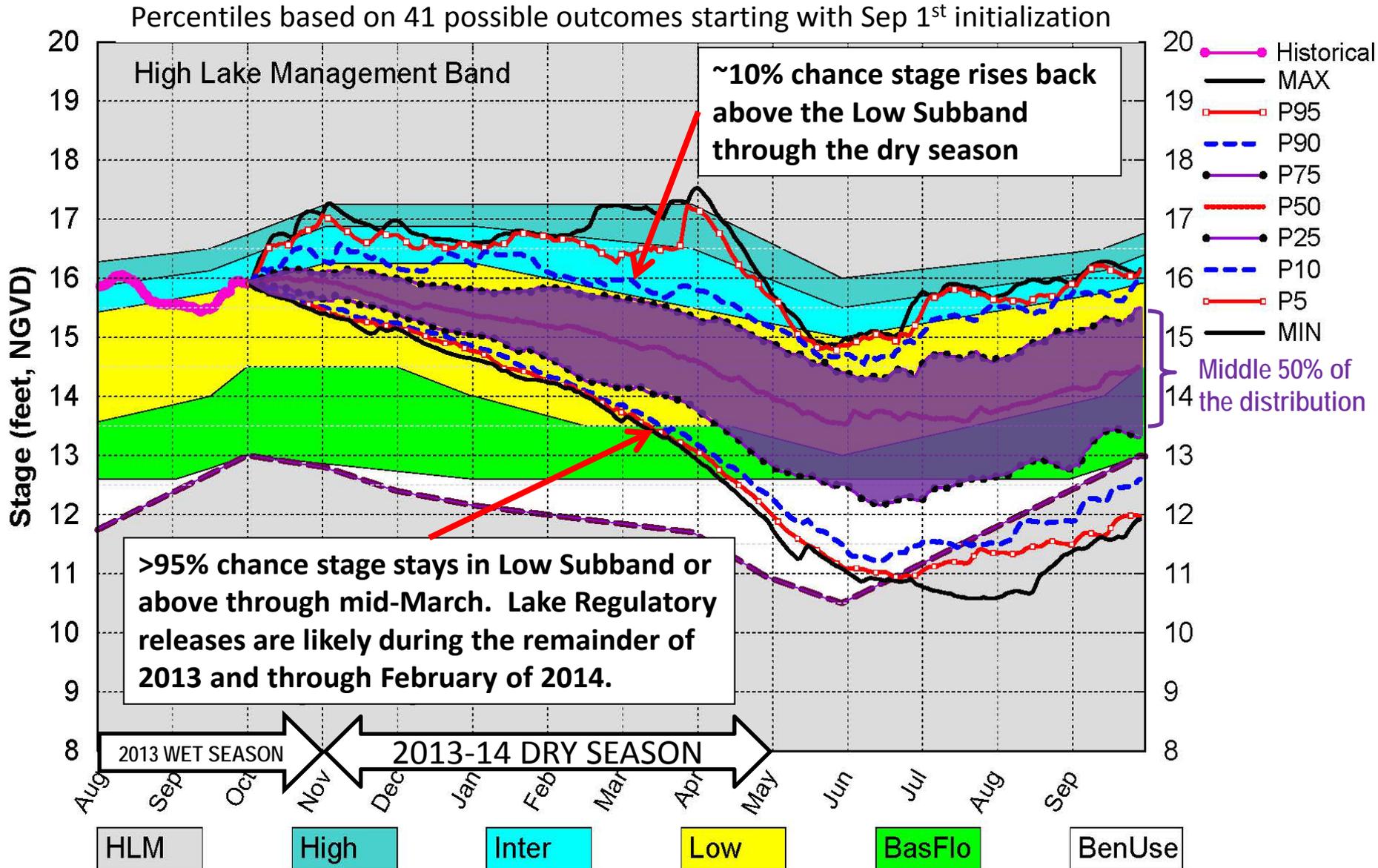
Jan - Mar 2014



Made 19-Sep-2013

The recent CPC precipitation outlooks for central & southern Florida indicate increased chances of Above-Normal rainfall for October 2013, Equal Chances (EC) of Above-Normal (A), Normal, and Below-Normal (B) for the Oct-Dec 3-month window, transitioning into Below Normal for a good portion of the 2013-2014 dry season.

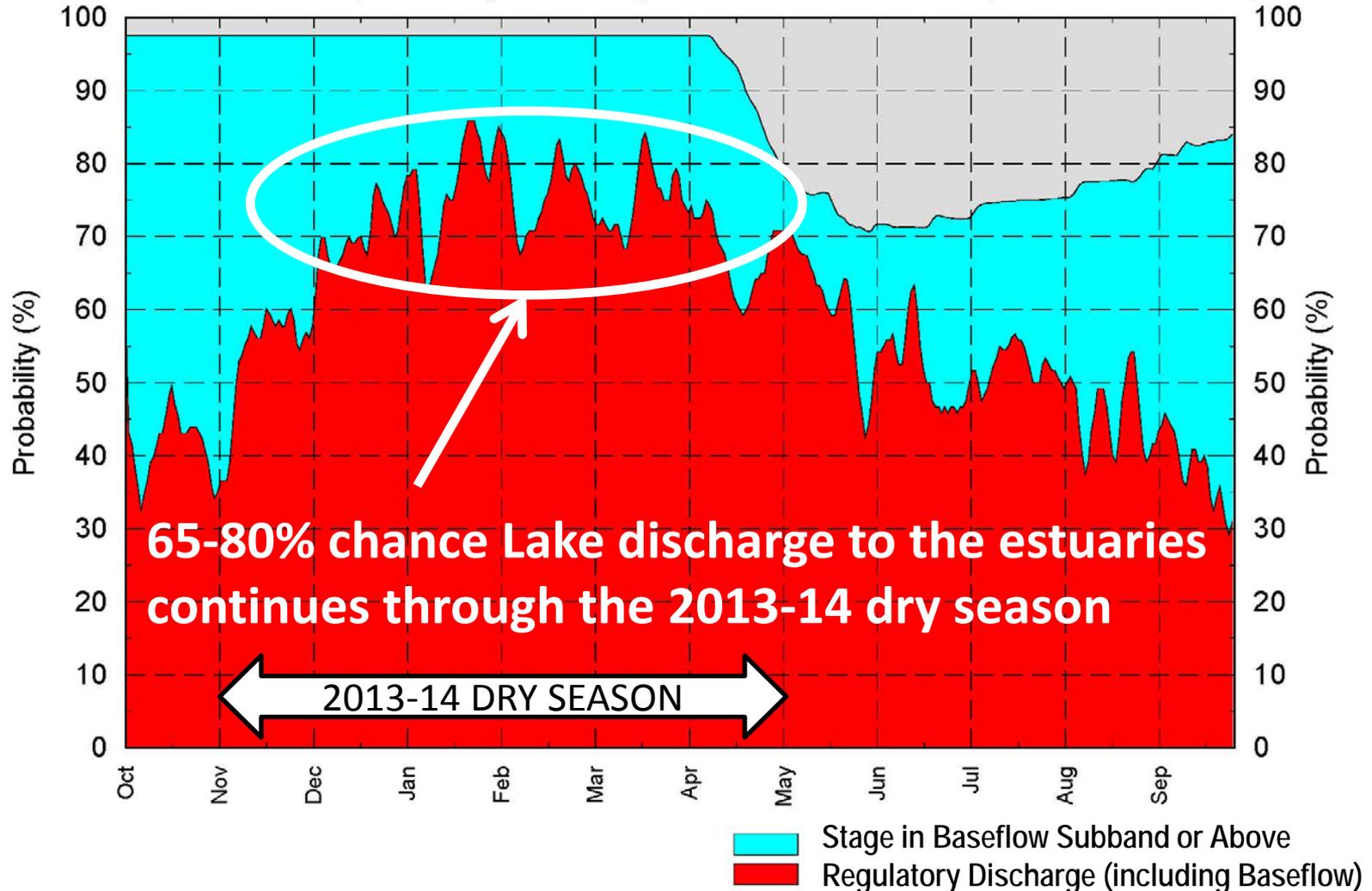
Lake Okeechobee SFWMM October 2013 Position Analysis



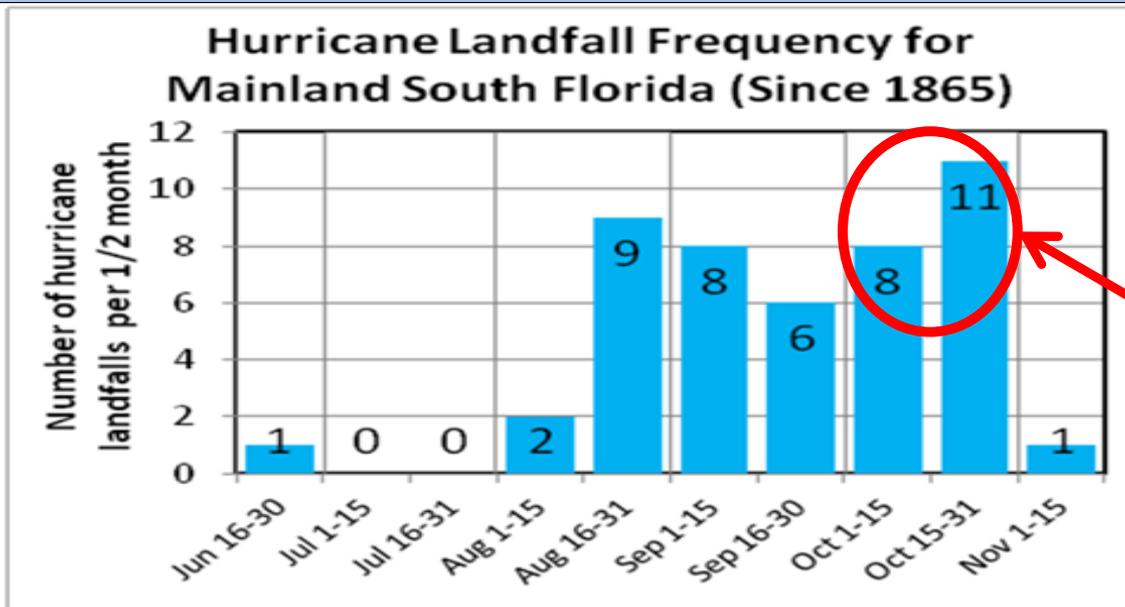
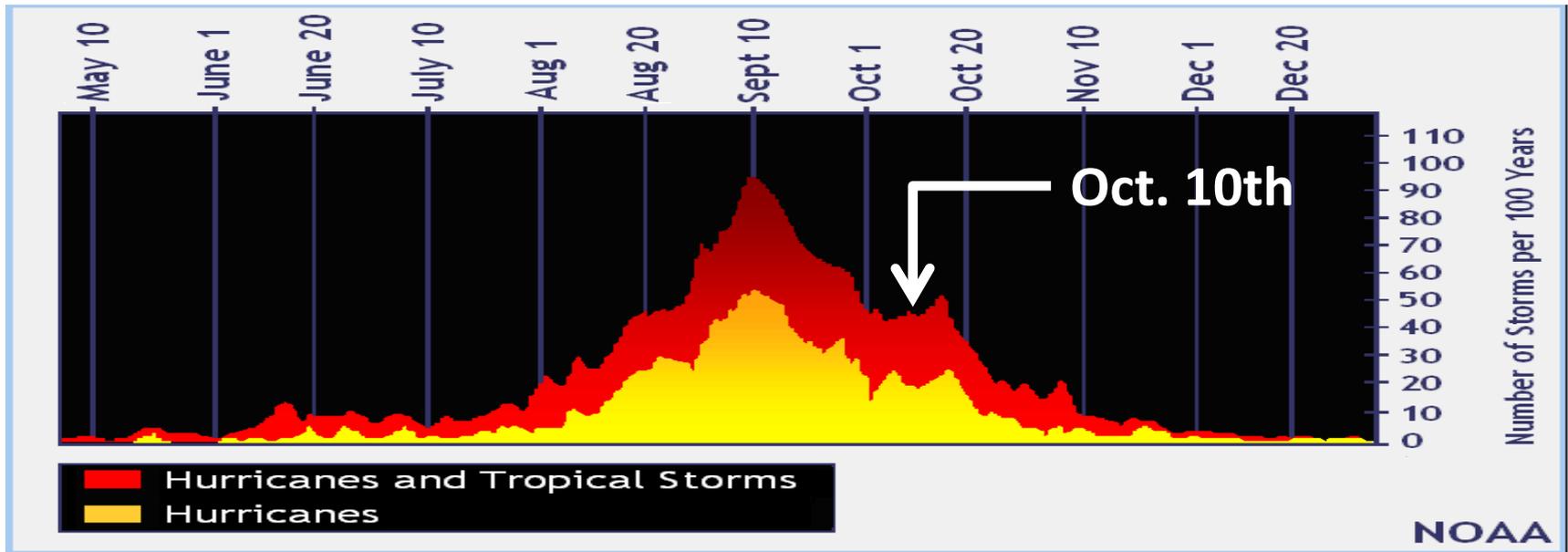
(See assumptions on the Position Analysis Results website)

Lake Okeechobee – LORS2008 Releases to the Estuaries

Unconditional PA Operations (See assumptions on the Position Analysis Results website)



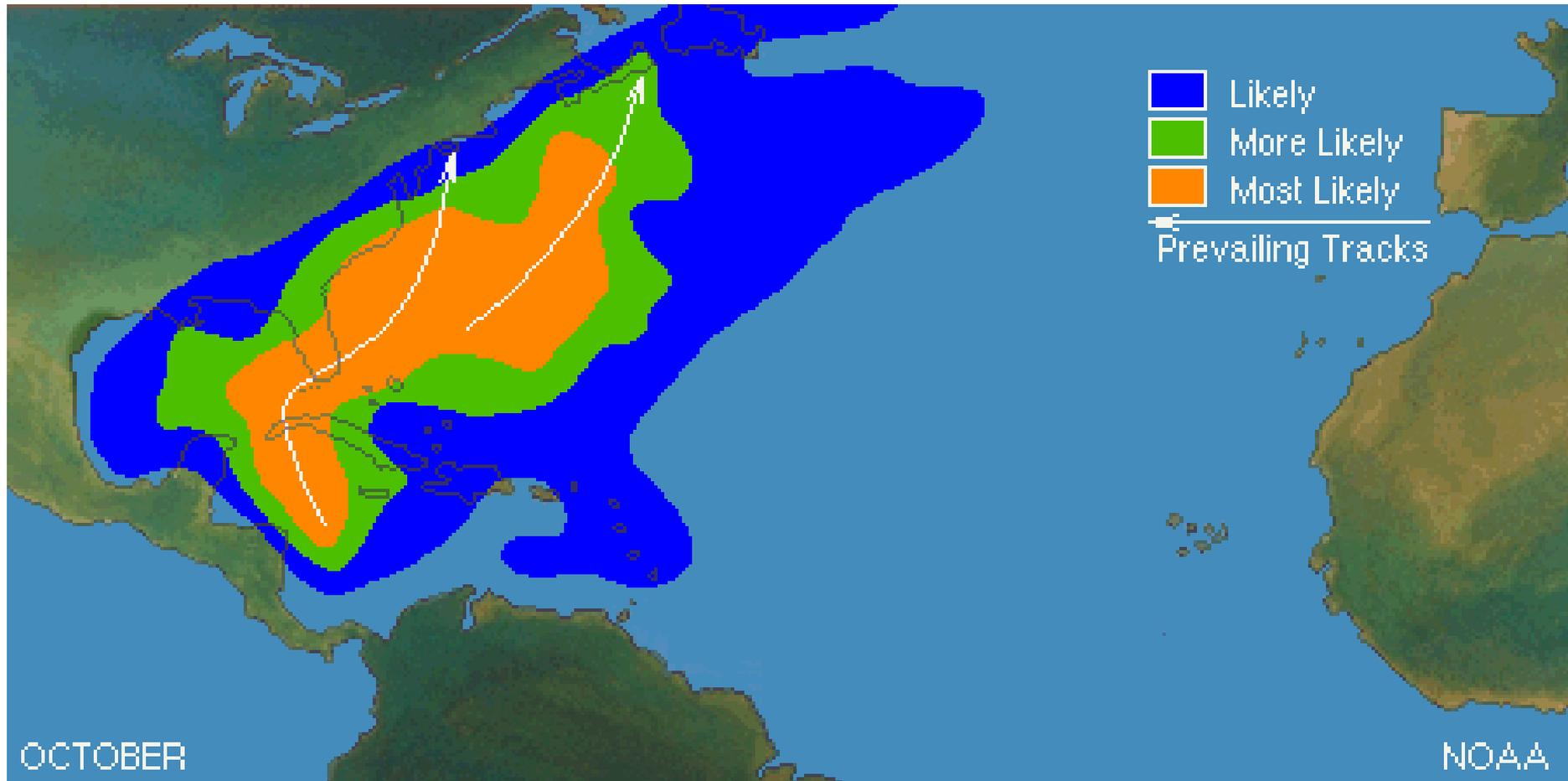
Atlantic Tropical Storm & Hurricane Season 1-June to 30-November



October is the peak Hurricane landfall month for South Florida

Source: Rob Molleda,
NWS Miami/South Florida
Forecast Office **28**

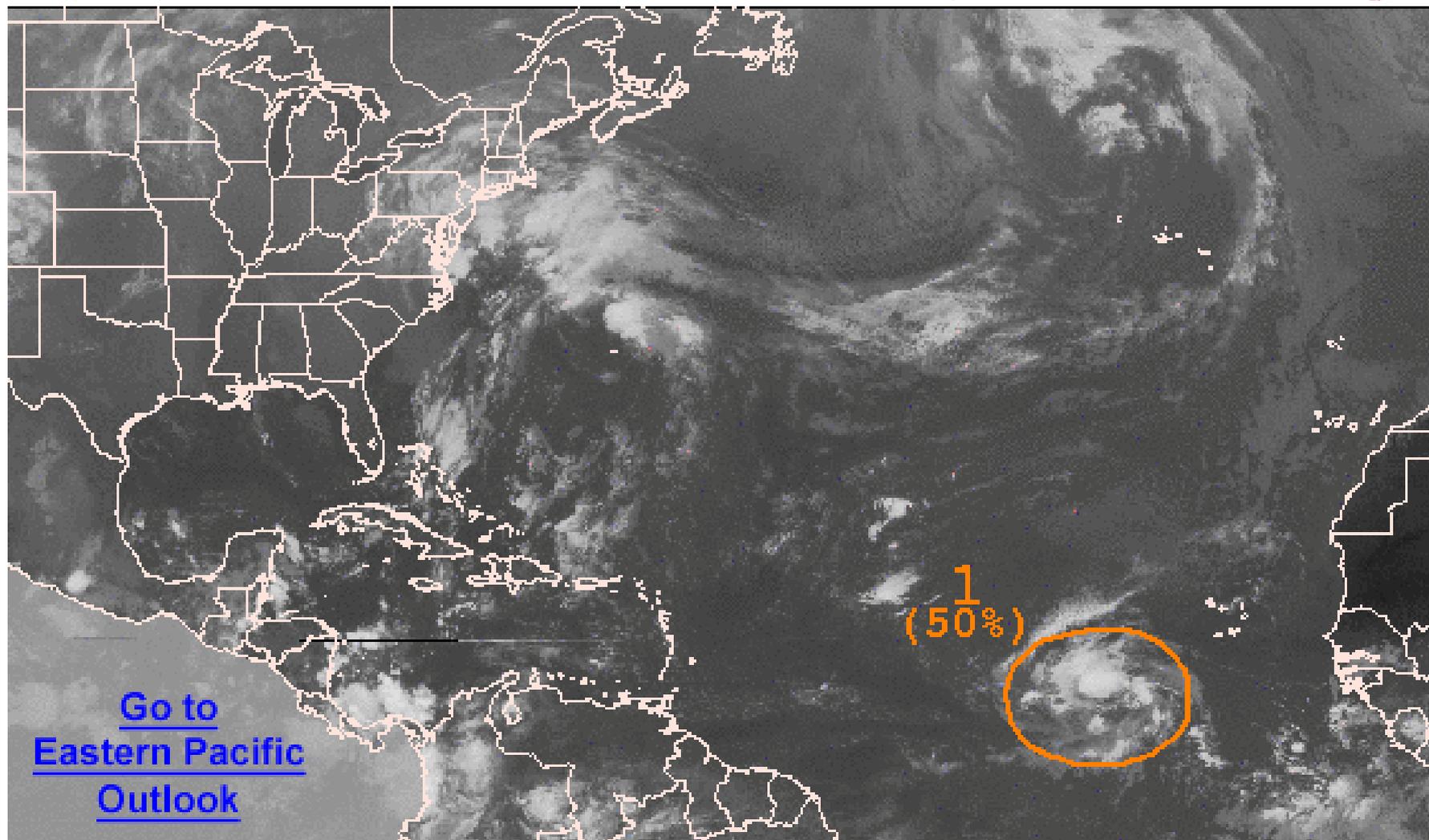
Typical Areas of Tropical Origin October





Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



800 AM EDT THU OCT 10 2013

Satellite Image: 0652 AM EDT

Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

 Low <30%

 Medium 30-50%

 High >50%

QUESTIONS?

